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AUTHOR Ignash, Jan
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ABSTRACT

To gain a more complete understanding of the community college curriculum, the Center for the Study of Community Colleges (CSCC), in Los Angeles, California, augmented its 1991 national study of liberal arts courses, with a 1992 study of non-liberal arts courses. Data were drawn from the same 164 community colleges that responded to the 1991 survey, representing 68% of those initially contacted. Specifically, the study examined the ratio of liberal arts to non-liberal arts courses; the percentage of non-liberal courses that are transferable to four-year institutions; and how transferability varies between comprehensive colleges/universities and research universities in California, Illinois, and Texas. Study findings included the following: (1) a total of 104,565 course sections were tallied in the two studies, 45,360 (43.4%) of which were coded as non-liberal arts offerings; (2) the categories of non-liberal arts courses were business/office skills (24.6% of non-liberal offerings), personal skills (19.1%), trade/industry (18.6%), technical education (18.2%), health (10.2%), marketing and distribution (3.4%), education (2.5%), engineering technology (2%), agriculture (1.2%), and home economics (0.2%; (3) in California, 61.7% of non-liberal arts courses were transferable to the California State University, while 28.9% were transferable to the research oriented University of California, with similar transfer disparities found between comprehensive colleges and research universities in Illinois; and (4) trade and industry courses do not transfer at high percentages, but personal skills and avocational (especially physical education) courses do. Data tables and a non-liberal arts taxonomy are included. (PAA)

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Community College Non-Liberal Arts: Implications for Transferability

Jan Ignash
Center for the Study of Community Colleges
1749 Mandeville Lane
Los Angeles, CA 90049

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COMMUNITY COLLEGE NON-LIBERAL ARTS: IMPLICATIONS FOR TRANSFERABILITY

Introduction

Trends in the community college liberal arts curriculum have been charted for close to two decades. Courses in humanities, English, fine and performing arts, social sciences, the hard sciences, and mathematics and computer sciences form the core of the liberal arts curriculum and, except for developmental or remedial courses in these areas, most transfer to four-year institutions. Areas of increase or decrease in the liberal arts curriculum have been consistently tracked through two national databases (see Cohen and Brawer, (1987) and Cohen and Ignash, (1992) for a description of the community college liberal arts curriculum; see Lewis and Farris, (1990) for the undergraduate liberal arts curriculum). The most recent study conducted by the Center for the Study of Community Colleges (CSCC) in spring 1991 was the seventh in a series of studies tracking community college liberal arts course offerings since 1975.

Until recently, however, a complete description of the community college curriculum has never been attempted, since a concomitant description of the *non*-liberal arts curriculum was not provided along with that of the liberal arts. During spring 1992, the CSCC developed a taxonomy for the non-liberal arts and tallied course sections of this segment of the curriculum using the same 164 community colleges which participated in the National Liberal Arts Study.

That the non-liberal arts have flourished in recent years is due to a variety of factors. As the CSCC Non-liberal Arts Study will show, a high percentage of non-liberal arts courses in many subject areas are directly transferrable to four-year institutions. This factor may be paramount in underscoring the "validity" of the non-liberal arts, since students are not foreclosing their options for further studies through the pursuit of study of the non-liberal arts. A second factor is that of prestige. As many professions require increased years of study as a condition for employment, the status of those professions rises accordingly. Non-liberal arts education need not therefore be viewed as education leading away from a baccalaureate degree.

This paper provides the results of the 1992 Non-Liberal Arts Study, with reference to very general results of the National Liberal Arts Study. Implications for the transferability of the non-liberal arts are also presented.

Research Questions

Specific research questions addressed by the 1991 National Liberal Arts Curriculum Study and the 1992 Non-Liberal Arts Curriculum Study provide a description of the total community college credit curriculum. In addition, the linkage of these two studies to the results of the Transfer Assembly Project, also conducted by the CSCC, will eventually address research questions which go beyond description. The following research questions were foci of the non-liberal arts study:

- What is the ratio of liberal arts to non-liberal arts in community colleges nationwide?
- What percentage of courses in the various non-liberal arts areas are transferable to four-year institutions? Does "non-liberal arts" mean "non-transfer?"
- How greatly does community college non-liberal arts course transferability[1] vary according to type of four-year institution?

Methodology

Tallying and Coding Course Offerings in the Liberal Arts and Non-Liberal Arts

One hundred and sixty-four community colleges nationwide participated in both the 1991 National Liberal Arts Curriculum Study and the 1992 Non-Liberal Arts Study. Letters of invitation were sent to the Presidents of a random sample of community colleges listed in the 1991 Directory of the American Association of Community and Junior Colleges and a 68% response rate was obtained. Fifty-one of the colleges were small (less than 1500 students), 56 were medium-sized (between 1500 and 6000 students) and 57 were large colleges (greater than 6000 students). Each participating college was requested to send a course catalog and course schedule for spring session 1991.

With only minor changes, the liberal arts courses in the schedules were tallied and coded according to a taxonomy used by the CSCC since 1975.[2] The

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[1]"Transferability" and "transferability rate" are used throughout this paper to refer to *courses* which transfer from two-year to four-year institutions. The terms "transfer" and "transfer rate" are used to refer to *students* who transfer.

[2]An example of a minor change to the 1991 study include the creation of a new sub-subject category for "Asian Languages" under "Foreign Languages."

consistency in the taxonomy used was critical in making comparisons across studies. The taxonomy divided the liberal arts curriculum into six major disciplines: humanities, English, fine and performing arts, social sciences, the hard sciences, and mathematics and computer sciences. The six disciplines were divided into fifty-five broad subject areas, with these being further divided into two hundred and forty-five sub-subject areas. For example, a class entitled, "California History: 1865 to the Present," would have been coded under the sub-subject area "State and Local" under the broad subject area "History" in the discipline of "Humanities." Each of the courses were also coded for their level; "remedial" courses were those which were compensatory or developmental and considered below college-level proficiency, "standard" courses were any introductory or regular college courses which did not carry a prerequisite, and "advanced" courses were any which required a prerequisite in the same or a related field in order to enroll in the course. Foreign languages were a special case, however, in that only third and fourth years of study were considered advanced.

For the non-liberal arts study, however, a taxonomy had to be developed, since none existed for this segment of the community college curriculum. Based largely on the "Taxonomy of Academic and Vocational Courses for Less-than-4-Year Postsecondary Institutions" (Grubb, June 1987), a CSCC taxonomy was developed for the non-liberal arts courses using ten major discipline areas: Agriculture Technology, Business and Office, Marketing, Health, Home Economics, Technical Education, Engineering Technology, Trade and Industry, Education, and Other. (See Appendix for Non-Liberal Arts Taxonomy).

In both studies, certain classes were not tallied. In order for a class to be coded, it had to list a definite time and meeting place. As a result, laboratory, independent study, field study, cooperative education, and apprenticeship classes were not coded.

Transferability Rates for the Non-Liberal Arts

For the non-liberal arts study only, course transferability rates were calculated for the states of California, Illinois, and Texas. Any course at a community college is likely to be accepted by some four-year institution somewhere within the state for credit. In order to avoid accumulating useless data showing that all community college courses are transferrable somewhere, the decision was made to calculate transferability rates to two specific types of four-

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Asian Languages had formerly been included under "Other Foreign Languages" in the taxonomy.

year institutions--a "flagship" research university and a comprehensive college or university.[3]

In order to create a uniform basis of comparison between states, "transfer" was defined in this study as course-to-course transfer equivalencies, rather than "program" or "block" transfer of courses between institutions. Transferrable courses were those which carried credit to four-year institutions in one of four categories: 1) general education credit, 2) general elective credit, 3) specific course credit in a major field, or 4) major field elective credit. The goal was to discover which courses a student could count on transferring to four-year institutions--even if that student had only taken a few community college courses.

Not all officials in the different states think of transfer in terms of specific "course" transfer, that is, the transfer of a specific community college course for either general or elective credit at a particular four-year college. Officials in states such as Florida, for example, prefer to consider transfer in terms of "degree completer" patterns. Community college students in Florida are strongly encouraged to complete the associate's degree or 60 credits in a specified program before transferring to a four-year institution with junior-level standing.

Since the method of determining transferability of courses differs between states, a "generic" methodology for collecting this data for the three states involved in the study was not possible. In California, course transferability was recorded right in the college course schedules; in Texas, articulation officers at the community colleges provided the data; and in Illinois, transfer guides were obtained from the state postsecondary agency. and used to calculate percentages of courses in each of the ten major non-liberal arts areas which transfer to four-year institutions. The results are presented below for the states of California, Texas, and Illinois.

Results

What Is the Ratio of Liberal Arts to Non-Liberal Arts?

For the Spring 1991 National Liberal Arts Curriculum Study, 59,205 liberal arts course sections were tallied by staff at the CSCC. In the 1992 study of the non-liberal arts, 45,360 sections were tallied. The total number of course sections coded in the two studies is 104,565. The ratio of non-liberal arts to liberal arts is 43.4% or, stated conversely, the ratio of liberal arts to non-liberal arts is 56.6% of the total community college curriculum.

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[3]Research Universities I and Comprehensive Universities and Colleges I were defined in this study using the definitions in the 1987 edition of the Carnegie Foundation's A Classification of Institutions of Higher Education, p. 7.

A possible explanation for the lower percentage occupied by the non-liberal arts stems from the way in which courses were coded. As noted in the Methodology section of this paper, a course had to list a definite time and meeting place in order to be coded. Therefore, laboratory courses, clinicals, practicums, field experience, independent study, and self-paced or modular classes were not included in the tallies for either the liberal arts or the non-liberal arts. Since laboratory classes occur with greater frequency in many non-liberal arts subject areas, their omission may at least partially account for the lower percentage of non-liberal arts courses in relation to the liberal arts. Laboratory classes are especially popular in many nursing and allied health programs, in technical education program classes such as computer literacy and data processing, and in trade and industry subject areas such as auto mechanics and cosmetology. In the liberal arts, however, fewer laboratory classes are offered. The largest liberal arts subject area offering laboratory classes is most likely music, where "applied" music classes, (often private lessons), were coded in the study as laboratory classes. Some laboratory classes are also offered in the hard sciences and in foreign language classes, though separate language laboratory classes have declined in popularity and, overall, few sections are offered.

What Does the Total Curriculum Look Like?

The tables below provide the percentage breakdown of the total curriculum by major subject area. Table 1 provides a description of the percentages occupied by all six liberal arts and ten non-liberal arts discipline areas.

Table 1: Percentage of Total Curriculum by Major Discipline Areas

Discipline	No. Sections	Percent of Total Curriculum
Humanities	14,034	13.42%
English	13,327	12.75%
Math and Computer Sciences	11,176	10.69%
Business and Office	11,156	10.67%
Personal Skills & Avocational	8,643	8.27%
Trade & Industry	8,420	8.05%
Technical Education	8,229	7.87%
Sciences	8,031	7.68%
Social Sciences	6,966	6.66%
Fine and Performing Arts	5,671	5.42%
Health	4,641	4.44%
Marketing	1,523	1.46%
Education	1,147	1.10%
Engineering Technologies	889	0.85%
Agriculture (Non-Liberal Arts)	529	0.51%
Home Economics	106	0.10%
Other	77	0.07%
Total	104,565	100.0%

Tables 2 and 3 below provide the percentages occupied by each discipline area within the liberal arts and the non-liberal arts, respectively.

Table 2: Percentage of Liberal Arts Curriculum by Discipline Area, 1991 (N = 164)

Discipline Area	Percent of Liberal Arts
Humanities	23.7%
English	22.5%
Fine and Performing Arts	9.6%
Social Science	11.8%
Science	13.6%
Mathematics and Computer Science	18.9%

Table 3: Number of Sections Offered and Percent of Non-Liberal Arts Curriculum, 1992, (N = 164)

Discipline Area	No. Course Sections	% of Non-Liberal Arts
Agriculture (Technology)	529	1.2%
Business & Office	11,156	24.6%
Marketing & Distribution	1,524	3.4%
Health	4,629	10.2%
Home Economics	106	.2%
Technical Education	8,233	18.2%
Engineering Technology	889	2.0%
Trade & Industry	8,427	18.6%
Personal Skills	8,643	19.1%
Education	1,147	2.5%
Other	77	.2%

What Transfers in the Non-Liberal Arts in California?

The system for assessing course transferability in California is fairly simple. State mandate obliges community colleges to list in their catalogs or schedules which courses will transfer to one of the two public systems of higher education in the state--the University of California (UC), with its nine campuses, or the California State University system (CSU), with its twenty campuses. Some community college schedules and catalogs list which individual campuses within the entire system will accept a specific course for transfer credit, while others merely list a course as acceptable for transfer somewhere with the UC or CSU systems. Determining transferability, therefore, was easy since catalogs and schedules clearly designated individual course transferability.

Thirty California community colleges participated in this phase of the Non-liberal Arts Study. Not surprisingly, the findings for California indicated very different transferability rates from the community colleges to the research universities of the UC system and to the state comprehensive universities, the CSU system. Within the UC system, only courses within the area of Personal Skills and Avocational Courses transferred in high numbers (76.7%), largely because of the extremely high percentage of Physical Education courses which transferred. In fact, the Personal Skills subject area accounted for 26.5% of the non-liberal arts curriculum for California, a full 7.4 percentage points higher than the national percentage of 19.1%.

Transferability percentages to the UC system fell markedly after the high of 76.7% for Personal Skills. The next highest transferability rate for California community colleges was "Other" (35.3%). The small percentage of total California courses coded under this category, 17 courses (or .1% percent) of a total 12,632, however, make this category too small to be reliable. All other subject areas yielded transferability percentages at or below 23%.

Table 4: **Percentage of Non-Liberal Arts Courses which Transfer to the UC and CSU Systems, California Colleges (N = 30)**

Transfer Discipline Area	CSU System	UC System
Agriculture (non-liberal arts)	64.5%	21.0%
Business & Office	61.0	23.0
Marketing & Distribution	70.3	1.6
Health	54.3	16.3
Home Economics	47.1	12.9
Technical Education	52.8	11.0
Engineering Technology	62.6	5.7
Trade & Industry	35.7	3.7
Personal Skills	88.0	76.7
Education	70.6	5.6
Other	94.1	35.3
Overall Transferability	**61.7%**	**28.9%**

Except in the area of Personal Skills and Avocational courses, transfer rates in the non-liberal arts from California community colleges are considerably lower to the UC system than to the CSU system. Because the UC system accepts almost all physical education courses at community colleges, only 11.3 percentage points separate UC acceptance of transfer credit of Personal Skills courses (76.7%) from CSU acceptance rates (88%). In the other nine non-liberal arts subject categories, the differences in rates of acceptance for transfer credit between the two systems range from 32% to 68.7%. The UC system is clearly more selective in allowing transfer credit for non-liberal arts courses than the CSU system.

Within the state comprehensive university system, however, an overall 61.7% of community colleges courses transferred, with a range of from 88% in Personal Skills courses to a low of 35.7% in Trade and Industry courses. In both the UC and CSU systems, Trade and Industry courses held among the lowest rankings in percentage of transferrable courses. If Trade and Industry courses were the only non-liberal arts courses considered, then some merit might exist in the charge that students who take non-liberal arts courses are denied access to four-year degrees via the transfer function. But taken as a whole, the non-liberal arts show remarkable transferability to the state university system and challenge the notion that students who take courses in these fields are "cooled out" of baccalaureate degree programs. Some worth may exist, however, in the proposition that a status difference does exist among the various subjects of the non-liberal arts. Certainly for students who are enrolled in Trade and Industry programs, baccalaureate degrees appear less accessible.

What Transfers in Texas?

Eleven Texas community colleges participated in the transferability component of the non-liberal arts study. Transfer articulation coordinators at these colleges provided written transfer agreements designating courses as transferrable or non-transferrable to the flagship research institution in Texas, the University of Texas at Austin, and to one of two state comprehensive universities, Stephen F. Austin State or Southwest Texas State Universities. Table 10 provides the results for Texas:

Table 5
Transferability of Texas Non-Liberal Arts Courses (N = 11)

Transfer Subject Area	State Comprehensive Univ.	Research Univ.
Agriculture	28.0%	16.0%
Business & Office	41.0	30.3
Marketing & Distribution	43.9	39.4
Health	7.4	6.8
Home Economics	N.A.[4]	N.A.
Technical Education	71.1	56.2
Engineering Technology	0	0
Trade & Industry	5.8	5.8
Personal Skills & Avocational Courses	100.0	99.8
Education	50.0	17.4
Other	N.A.	N.A.
Overall Transferability	**41.6%**	**35.3%**

The results for Texas are surprising in that the overall transferability rate, as well as rates for a number of individual subject areas, are quite close. A mere 5.3 percentage points differentiate overall transferability rates between the state's flagship research institution and two state comprehensive universities. This pattern is quite different from that of California.

In Texas, each community college has separate transfer agreements with each four-year institution, unlike California which lists *system-wide* transferability. Still, this difference does not account for the discrepancy between the California and the Illinois data.

Further study of transferability in Texas yielded an interesting case study in which data was obtained on transferability percentages of one community college to fifteen different four-year institutions in the state, two of them private. Table 11 below lists the courses which transfer from Lee College to various four-year institutions. These statistics are for courses offered, not sections, and are not directly comparable to other statistics in this study. The percentages do illustrate,

[4]Too few sections were coded to provide reliable data.

however, differences among institutions which accept courses from one community college.

Table 6
Courses Which Transfer from Lee College

Public Four-Year Institutions	All Courses Offered	Non-liberal Arts Courses
Sam Houston State University	45.7%	27.5%
Texas A & M University	36.9	16.2
Univ. of Houston-Clear Lake	28.8	15.8
Univ. of Houston-Downtown	52.8	33.8
Univ. of Houston-Main	93.3	93.5
Stephen F. Austin State Univ.	46.9	28.9
Univ. of Texas-Austin	40.6	21.6
Texas Tech.	14.2	5.5
Southwest Texas State Univ.	97.4	97.3
Lamar	41.6	21.2
University of North Texas	73.2	64.4
East Texas State Univ.	92.9	92.2
Texas Woman's University	62.9	50.8
Private Four-Year Institutions		
Baylor	12.7	2.5
Houston Baptist	11.6	6.5

Several findings from the above table are worth comment. First, the two private universities have much lower transferability rates than all but one of the public institutions. Secondly, the wide disparity between transferability rates to the four-year institutions (from a high of 97.4% for all courses offered to a low of 14.2%) may be accounted for by two factors influencing articulation agreements: the proximity between the two- and four-year institutions and the ability of the community college articulation officer to build a relationship with a university's transfer coordinator. Lee College in Baytown, Texas, is a considerable distance from the four-year institution where it has its lowest transferability percentage of 14.2%, Texas Tech. in Lubbock. And thirdly, the differences between transferability of all courses offered and just the non-liberal arts courses range from a high of 20.7 percentage points to a low of .4%. In one instance, the non-liberal

arts actually transfer at a slightly higher percentage than all courses offered, 93.5% to 93.3% at the University of Houston-Main. Overall, there do not appear to be wide differences between transferability rates of all courses offered and just the non-liberal arts.

What Transfers in Illinois?

Three Illinois community colleges provided data on non-liberal arts transferability to Illinois State University and to the state's flagship research institution, the University of Illinois at Urbana-Champaign. Transfer Guides were obtained from the Illinois Community College Board and used to calculate transferability percentages. The findings, listed in Table 12 below, follow California's pattern of much higher transferability percentages to the state university than to the four-year research institution:

Table 7
Transferability Rates of Illinois Community Colleges (N = 3)

Community College	Univ. of Illinois-Urbana-Champaign	Illinois State Univ.
Wilbur Wright	23.8%	92.7%
Black Hawk	7.2	79.0%
Triton	19.2	79.2

The degree to which the various non-liberal arts subject areas transfer follows a pattern similar to that of California's, although the pattern is even more pronounced in Illinois. The University of Illinois research university showed higher selectivity than the University of California system in accepting non-liberal arts courses for credit (15.9% to 28.9% respectively) and Illinois State University displayed a considerably higher rate of acceptance of non-liberal arts courses for transfer than did the California State University system (80.4% to 61.7% respectively). Two subject areas which yielded different results in Illinois, however, were the high percentage of Trade and Industry courses which transferred to Illinois State University (86.9%) compared to that which transferred to the California State University system (35.7%) and the comparatively low transferability rate of Personal Skills courses, largely physical education courses, to the University of Illinois (49.5%). For several subject areas, data was too sparse to report. In general, data for Illinois should be considered preliminary, since only three community colleges furnished complete data for analysis.

Table 8
Non-Liberal Arts Transferability Rates in Illinois Community Colleges (N = 3)

Transfer Subject Area	Illinois State	University of Illinois-Urbana-Champaign
Agriculture	100.0%	0%
Business & Office	78.7	30.9
Marketing & Distribution	91.5	0
Health	29.8	.9
Home Economics	N.A.	N.A.
Technical Education	97.2	7.3
Engineering Technology	100.0	0
Trade & Industry	86.9	4.8
Personal Skills & Avocational Courses	89.2	49.5
Education	92.9	17.9
Other	N.A.	N.A.
Overall Transferability	**80.4%**	**15.9%**

Overall Patterns

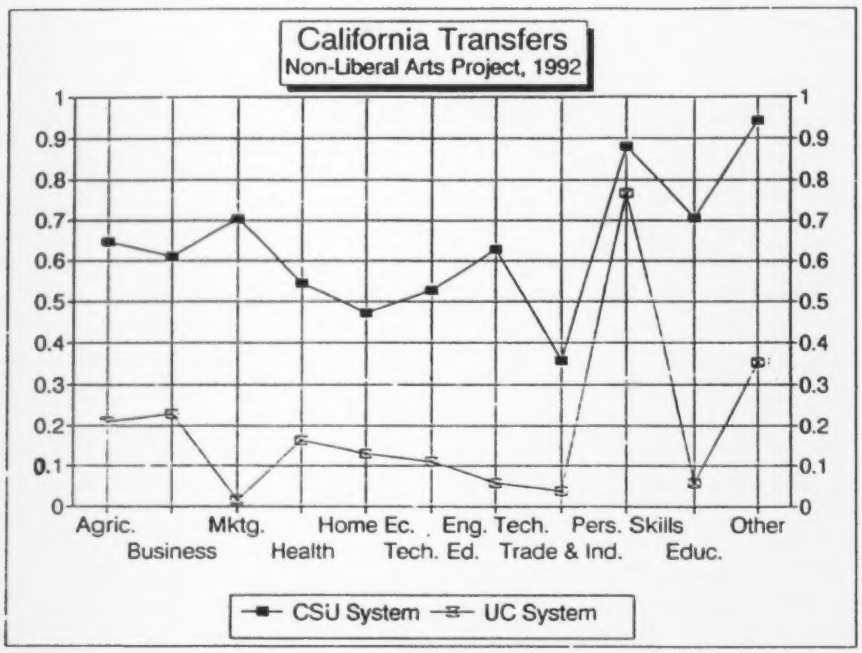
What General Patterns Are Discernible from the Transferability Data?

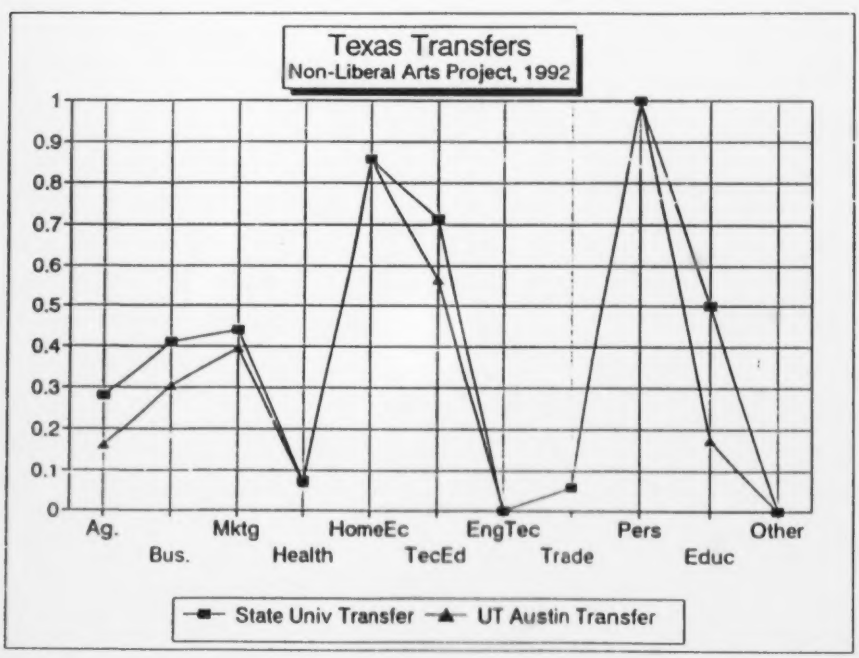
Similarities exist in the overall transferability patterns for Illinois and California, although substantial differences also emerge between the two states in transferability percentages for specific disciplines. The following very general observations are possible: 1) Research universities are considerably more selective in accepting non-liberal arts courses for transfer credit. 2) Personal Skills and Avocational Courses tend to transfer at a high rate, largely because of Physical Education courses. 3) Trade and Industry courses do not transfer at a high rate, except to Illinois State University. 4) Health Occupations courses also tend to have comparatively low transferability rates.

The overall pattern for Texas, however, is considerably different than for the other two states. Texas four-year institutions seem to accept non-liberal arts courses for transfer at much more similar rates for both state universities and for

the flagship research institution (41.6% and 35.3%) This selectivity difference is perhaps best revealed in the following graphs, comparing transferability data from Texas and California.

Figure 1
California and Texas Non-Liberal Arts Transferability Rates





Conclusions and Implications for Future Research

For the non-liberal arts, general findings indicate that courses in Trade and Industry do not transfer at high percentages but Personal Skills and Avocational Courses do, largely because of Physical Education courses. The second major finding is that research universities are more selective in the non-liberal arts courses they accept for transfer credit. This is especially true in California and Illinois, but less so in Texas. The third finding concerns the overall transferability of the non-liberal arts. Except for Trade and Industry courses, since most of the non-liberal arts do carry transfer credit, the concept "terminal education" should be laid to rest.

The non-liberal arts data will be further analyzed and compared with other data recently compiled by the CSCC. One set of tabulations will relate the non-liberal arts data to the college student transfer rates. Questions to be addressed in further analyses include whether community colleges with differing patterns of ethnicity and student transfer rates display different non-liberal arts curricular patterns. By linking the results of both CSCC curriculum studies with the Center's Transfer Assembly Project, issues can be addressed concerning the degree of educational and social opportunity afforded community college students throughout the total curriculum--liberal arts as well as non-liberal arts.

References

Cohen, Arthur M. and Brawer, Florence B. (1987) *The Collegiate Function of Community Colleges*. San Francisco: Jossey-Bass.

Cohen, Arthur M. and Ignash, Jan. M. (Fall 1992) "Trends in the Liberal Arts Curriculum" in *Community College Review, 20*(2): 50-56.

Lewis, Laurie L. and Farris, Elizabeth. (1990) "Undergraduate Course Offerings and Enrollments in Humanities." *Higher Education Surveys Report, Survey Number 11.* Rockville, MD: Westat, Inc. (ED 323 874)

Ignash, Jan. (1992) "Tracking the Liberal Arts Over Sixteen Years: Trends and Implications." Paper presented at the 1992 Conference of the California Association for Institutional Research, Ontario, California. (JC 920 562) (ED number pending; contact the ERIC Clearinghouse for Community Colleges, 310-825-3931 for further information.)

APPENDIX A

Center for the Study of Community Colleges
Non-Liberal Arts Curriculum Study

NON-LIBERAL ARTS TAXONOMY

The taxonomy used in this study to code courses in the non-liberal arts was based largely on the "Taxonomy of Academic and Vocational Courses for Less-than-4-Year Postsecondary Institutions" developed by the National Center for Research in Vocational Education (NCRVE) at Berkeley. Major categories were adopted from the NCRVE taxonomy and specific subject areas for inclusion into these categories were developed by staff at the Center for the Study of Community Colleges. The major categories and specific course areas are as follows:

Agriculture

Horticulture, agribusiness and crop production, forest products and other agriculture products, agricultural sciences, renewable natural resources, animal health technology, nursery operation

Business and Office

Accounting, taxes, business and management, secretarial and related (filing, typing, shorthand, 10-key calculations), labor law, will, trusts and estate planning, legal assistant, other business and office, air line ticketing and reservations

Marketing and Distribution

Real estate, fashion merchandising, salesmanship, auctioneering, advertising design layout, purchasing textiles

Health

Nursing, health sciences, allied health, CPR, emergency technician, nutrition, marriage and family counseling courses, drug counseling, working with juvenile delinquents, dental assisting, corrective and rehabilitative physical education or other physical therapy for the physically challenged

Home Economics

Home economics, sewing, cooking, preserving foods, home interior decorating, all home economics courses which are not focused on trade and industry and which are intended for one's personal use at home

Technical Education

Computer software applications (wordprocessing, spreadsheets, database programs, networking, desktop publishing--all *non-programming* computer applications); protective services including fire, police and law enforcement, lifeguard, and military science courses; communication technologies including journalism, TV, newspaper reporting, radio announcing, photo journalism, and other mass media courses, graphics and offset printing; commercial photography

Engineering Technologies

Most of this category was coded under the Spring 1991 Liberal Arts Study. Engineering courses which were too occupationally-oriented to be coded in the liberal arts, however, were coded under non-liberal arts. These non-liberal arts engineering courses focus on engineering principles such as "Analog or Digital Fundamentals" or "AC/DC Current" or "Ohm's Law" as well as more practical subject matter. Examples: "Avionics" (theory of flight and practical aspects of flying an airplane) or "Industrial Electricity."

Trade and Industry

Construction; automotive; aviation engineering (concerning the manufacture of airplanes); surveying; drafting including CAD/CAM; other mechanics and repairers; welding and precision metal; other precision production; transport and materials moving; consumer/personal/ miscellaneous services including cosmetology, upholstery; hospitality industry courses including culinary arts and wines; pattern design and many apparel construction courses; travel and tourist agent

Personal Skills and Avocational Courses

Physical Education, freshman orientation, introduction to the library, parenting, fashion color analysis, career and life planning, self-appraisal courses

Education

Early childhood education, physical education instructor courses, coaching, children's literature, nanny courses, math or music or art for teachers, courses for future instructors of the emotionally and mentally challenged

Other

Social Services program training courses, library cataloguing procedures